

SEQUENCE LISTING



<110> Knutzon, Debbie

<120> POLYUNSATURATED FATTY ACIDS IN PLANTS

<130> MOCO.156.00US

<140> 09/330,235

<141> 1999-06-10

<150> 60/089,043

<151> 1998-06-12

<160> 22

<170> PatentIn version 3.0

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<212> DNA

<213> Caenorhabditis elegans

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Ile	Gly	Asp	Ile	Arg	Ala	Ala	Ile	Pro	Lys	His	Cys	Trp	Val	Lys	Ser
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Pro	Leu	Arg	Ser	Met	Ser	Tyr	Val	Thr	Arg	Asp	Ile	Phe	Ala	Val	Ala
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Leu	Tyr	Trp	Val	Ala	Gln	Gly	Thr	Leu	Phe	Trp	Ala	Ile	Phe	Val	Leu
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Gly	His	Asp	Cys	Gly	His	Gly	Ser	Phe	Ser	Asp	Ile	Pro	Leu	Leu	Asn
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Ser	Val	Val	Gly	His	Ile	Leu	His	Ser	Phe	Ile	Leu	Val	Pro	Tyr	His
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Gly	Trp	Arg	Ile	Ser	His	Arg	Thr	His	His	Gln	Asn	His	Gly	His	Val
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Asp	Val	Thr	Lys	Phe	Leu	Ser	Arg	His	Pro	Gly	Gly	Val	Asp	Thr	Leu
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Leu	Leu	Gly	Ala	Gly	Arg	Asp	Val	Thr	Pro	Val	Phe	Glu	Met	Tyr	His
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Ala	Phe	Gly	Ala	Ala	Asp	Ala	Ile	Met	Lys	Lys	Tyr	Tyr	Val	Gly	Thr
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Leu	Val	Ser	Asn	Glu	Leu	Pro	Ile	Phe	Pro	Glu	Pro	Thr	Val	Phe	His
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Lys	Thr	Ile	Lys	Thr	Arg	Val	Glu	Gly	Tyr	Phe	Thr	Asp	Arg	Asn	Ile
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Asp	Pro	Lys	Asn	Arg	Pro	Glu	Ile	Trp	Gly	Arg	Tyr	Ala	Leu	Ile	Phe
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Gly	Ser	Leu	Ile	Ala	Ser	Tyr	Tyr	Ala	Gln	Leu	Phe	Val	Pro	Phe	Val
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Val	Glu	Arg	Thr	Trp	Leu	Gln	Val	Val	Phe	Ala	Ile	Ile	Met	Gly	Phe
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Ser	Val	Thr	His	Asn	Pro	Thr	Val	Trp	Lys	Ile	Leu	Gly	Ala	Thr	His
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Asp	Phe	Phe	Asn	Gly	Ala	Ser	Tyr	Leu	Val	Trp	Met	Tyr	Gln	His	Met
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Leu	Gly	His	His	Pro	Tyr	Thr	Asn	Ile	Ala	Gly	Ala	Asp	Pro	Asp	Val
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Ser	Thr	Ser	Glu	Pro	Asp	Val	Arg	Arg	Ile	Lys	Pro	Asn	Gln	Lys	Trp
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Tyr Pro Asp Ile Leu Ala Ile Ile Lys Asn Thr Cys Ser Glu Tyr Lys
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Asp His Pro Gly Gly Ser Val Ile Leu Thr His Val Gly Lys Asp Gly		
50	55	60

Thr Asp Val Phe Asp Thr Phe His Pro Glu Ala Ala Trp Glu Thr Leu			
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Ala Asn Phe Tyr Val Gly Asp Ile Asp Glu Ser Asp Arg Asp Ile Lys		
85	90	95

Asn Asp Asp Phe Ala Ala Glu Val Arg Lys Leu Arg Thr Leu Phe Gln		
100	105	110

Ser Leu Gly Tyr Tyr Asp Ser Ser Lys Ala Tyr Tyr Ala Phe Lys Val		
115	120	125

Ser Phe Asn Leu Cys Ile Trp Gly Leu Ser Thr Val Ile Val Ala Lys		
130	135	140

Trp Gly Gln Thr Ser Thr Leu Ala Asn Val Leu Ser Ala Ala Leu Leu			
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180	185	190
Leu Gly Gly Val Cys Gln Gly Phe Ser Ser Ser Trp Trp Lys Asp Lys		
195	200	205
His Asn Thr His His Ala Ala Pro Asn Val His Gly Glu Asp Pro Asp		
210	215	220
Ile Asp Thr His Pro Leu Leu Thr Trp Ser Glu His Ala Leu Glu Met		
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Phe Ser Asp Val Pro Asp Glu Glu Leu Thr Arg Met Trp Ser Arg Phe		
245	250	255
Met Val Leu Asn Gln Thr Trp Phe Tyr Phe Pro Ile Leu Ser Phe Ala		
260	265	270
Arg Leu Ser Trp Cys Leu Gln Ser Ile Leu Phe Val Leu Pro Asn Gly		
275	280	285
Gln Ala His Lys Pro Ser Gly Ala Arg Val Pro Ile Ser Leu Val Glu		
290	295	300
Gln Leu Ser Leu Ala Met His Trp Thr Trp Tyr Leu Ala Thr Met Phe		
305	310	315
Leu Phe Ile Lys Asp Pro Val Asn Met Leu Val Tyr Phe Leu Val Ser		
325	330	335
Gln Ala Val Cys Gly Asn Leu Leu Ala Ile Val Phe Ser Leu Asn His		
340	345	350
Asn Gly Met Pro Val Ile Ser Lys Glu Glu Ala Val Asp Met Asp Phe		
355	360	365
Phe Thr Lys Gln Ile Ile Thr Gly Arg Asp Val His Pro Gly Leu Phe		
370	375	380
Ala Asn Trp Phe Thr Gly Gly Leu Asn Tyr Gln Ile Glu His His Leu		
385	390	395
Phe Pro Ser Met Pro Arg His Asn Phe Ser Lys Ile Gln Pro Ala Val		
405	410	415
Glu Thr Leu Cys Lys Lys Tyr Asn Val Arg Tyr His Thr Thr Gly Met		
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35 40 45

His Cys Phe Glu Arg Ser Gly Leu Arg Gly Leu Cys His Val Ala Ile
50 55 60

Asp Leu Thr Trp Ala Ser Leu Leu Phe Leu Ala Ala Thr Gln Ile Asp
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Lys Phe Glu Asn Pro Leu Ile Arg Tyr Leu Ala Trp Pro Val Tyr Trp
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Ile Met Gln Gly Ile Val Cys Thr Gly Val Trp Val Leu Ala His Glu
100 105 110

Cys Gly His Gln Ser Phe Ser Thr Ser Lys Thr Leu Asn Asn Thr Val
115 120 125

Gly Trp Ile Leu His Ser Met Leu Leu Val Pro Tyr His Ser Trp Arg
130 135 140

Ile Ser His Ser Lys His His Lys Ala Thr Gly His Met Thr Lys Asp
145 150 155 160

Gln Val Phe Val Pro Lys Thr Arg Ser Gln Val Gly Leu Pro Pro Lys
165 170 175

Glu Asn Ala Ala Ala Val Gln Glu Glu Asp Met Ser Val His Leu
180 185 190

Asp Glu Glu Ala Pro Ile Val Thr Leu Phe Trp Met Val Ile Gln Phe
195 200 205

Leu Phe Gly Trp Pro Ala Tyr Leu Ile Met Asn Ala Ser Gly Gln Asp
210 215 220

Tyr Gly Arg Trp Thr Ser His Phe His Thr Tyr Ser Pro Ile Phe Glu
225 230 235 240

Pro Arg Asn Phe Phe Asp Ile Ile Ser Asp Leu Gly Val Leu Ala
245 250 255

Ala Leu Gly Ala Leu Ile Tyr Ala Ser Met Gln Leu Ser Leu Leu Thr
260 265 270

Val Thr Lys Tyr Tyr Ile Val Pro Tyr Leu Phe Val Asn Phe Trp Leu
275 280 285

Val Leu Ile Thr Phe Leu Gln His Thr Asp Pro Lys Leu Pro His Tyr
290 295 300

Arg Glu Gly Ala Trp Asn Phe Gln Arg Gly Ala Leu Cys Thr Val Asp
305 310 315 320

Arg Ser Phe Gly Lys Phe Leu Asp His Met Phe His Gly Ile Val His
325 330 335

Thr His Val Ala His His Leu Phe Ser Gln Met Pro Phe Tyr His Ala
340 345 350

Glu Glu Ala Thr Tyr His Leu Lys Lys Leu Leu Gly Glu Tyr Tyr Val
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Tyr Asp Pro Ser Pro Ile Val Val Ala Val Trp Arg Ser Phe Arg Glu
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